

REMARKS

Claims 1-6 and 18-23 are pending in the application and stand rejected. By the present amendment, claims 19-23 have been amended. The Examiner's reconsideration of the rejection in view of the above amendments and following remarks is requested.

Claim Objections:

Applicant acknowledges the Examiner's renumbering of claims 7-12 to claims 18-23. In addition, claims 18-23 have been amended to change the dependency to correspond with the renumbering of the claims. Accordingly, withdrawal of the claim objection is requested.

Objection Under 35 U.S.C. § 132 / Rejection Under 35 U.S.C. § 112, First Paragraph

An objection was asserted under 35 U.S.C. § 132 on the grounds that Applicant's previously filed Amendment purportedly introduced new matter not supported by the original disclosure. In addition, claims 1-6 were rejected under 35 U.S.C. § 112, first paragraph, as purportedly failing to comply with the written description requirement. Essentially, Examiner contends that there is no support in the original specification for the recitation *wherein the first conductive material comprises a pillar extending from a bottom of the trench, wherein the first conductive material contacts the buried plate along an entire bottom portion of the trench and along a lower portion of the sidewalls of the trench*, as essentially recited in claim 1. Applicant strongly traverses such objection and rejection.

In support of such objection and rejection, Examiner appears to narrowly focus on the exemplary embodiment of Fig. 9 of Applicant's specification (see page 3 of the Final Office),

without considering Applicant's entire disclosure. Therefore, Examiner's analysis is legally deficient on its face, especially since other portions of Applicant's specification clearly provide support for the above claim recitation.

Indeed, by way of example with reference to the exemplary embodiments depicted in Figs. 7 and 8, it is abundantly clear that Applicant's specification provides legally sufficient and express support for a first conductive material (30) comprising a pillar (44) extending from a bottom of a trench (18), wherein the first conductive material (30) contacts a buried plate (35) along an entire bottom portion of the trench (18) and along a lower portion of the sidewalls of the trench (18) (see also, corresponding description on pages 10-11 of Applicant's specification), as essentially claimed in claim 1. Examiner cannot reasonably argue otherwise.

Accordingly, withdrawal of the objection under 35 U.S.C. § 132 and the claim rejections under 35 U.S.C. § 112, first paragraph, is requested.

Claim Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 2 was rejected under 35 U.S.C. § 112, second paragraph, for the reasons set forth on page 4 of the Final Office Action. Examiner essentially contends that “ ‘a pillar’ can not be ‘a plurality of pillars’ ”. Applicant traverses the rejection.

To begin, it should be pointed out that Claim 2 does not expressly recite that “a pillar is a plurality of pillars”. In contrast, claim 1 recites that *the first conductive material comprises a pillar* and Claim 2 recites that *the first conductive material is formed into a plurality of pillars*.

There is nothing inconsistent or indefinite with respect to such recitations. In fact, it is axiomatic that under U.S. Patent Law, when the preamble reads “comprising” the term “a” is

construed to mean “one or more”. As such, claim 1 can be interpreted such that the first conductive material comprises one or more pillars, and claim 2 can be interpreted to limit claim 1 such that the conductive material comprises more than one (a plurality) of pillars. Thus, claim 2 clearly complies with the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, withdrawal of the rejection is requested.

Claim Rejections- 35 U.S.C. § 102(b):

Claims 1-4, 6, 18-21, and 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Park (U.S. Patent No. 5,677,225). Applicant strongly traverses the rejection.

Indeed, at the very minimum, claims 1 and 18 are patentably distinct and patentable over Park because Park *clearly* does *not* disclose or suggest *a first conductive material and a buried plate forming a first electrode*, as essentially claimed in claims 1 and 18.

In particular, Examiner’s contention that Park discloses a first conductive material (26’) and buried plate (23) that form a first electrode, is misplaced. As explained in Applicant’s previous Amendment (which explanation Examiner has essentially ignored and failed to address), although Park arguably discloses a first conductive material (26’) having a pillar and a diffusion region (23), it is abundantly clear that the diffusion region (23) is not a “buried plate” that is part of a capacitor electrode, and it is abundantly clear that the conductive material (26’) and diffusion region (23) do not form a first electrode.

This is apparent due to the fact that the diffusion region (23) is *p-doped* using Boron atoms from the BSG material (see Park, Col. 3, lines 50-63), whereas the first conductive layer (26) is formed under an atmosphere using Phosphorus, which results in an *n-doped* material (see, Col. 4,

lines 11-18). As such, the *p-doped* region (23) essentially serves to isolate the plate (26).

In addition, one of ordinary skill in the art would know that an electrode (capacitor electrode) would not be formed having both n-doped and p-doped portions. Indeed, Park *expressly states* that element (26) is the first plate electrode (col. 4, lines 26-30). Park does *not* disclose that diffusion region (23) is a buried plate that forms part of the first plate electrode (26).


Thus, it is categorically clear that Park is legally deficient to establish a *prima facie* case of anticipation against claims 1 and 18. Claims 2-4 and 6 depend from claim 1, and claims 19-21 and 23 depend from claim 18. These dependent claims are patentably distinct and patentable over Park at least for the same reasons given for respective base claims 1 and 18. Accordingly, the withdrawal of the claim rejections under 35 U.S.C. § 102(b) is requested.

Claim Rejections- 35 U.S.C. § 103(a):

Claims 5 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Park as applied to claims 1 and 18 above, and further in view of Chang (U.S. Patent No. 6,077,739). Here, the obviousness rejections are based, in part, on the ground that Park discloses all the elements of claims 1 and 18, from which claims 5 and 22 respectfully depend. However, as noted above, Park does not disclose all the elements of claims 1 and 18. As such, the obviousness rejections are legally deficient on their face because such combination, at the very minimum, fails to disclose or suggest a *first conductive material and a buried plate forming a first electrode*, as essentially claimed in claims 1 and 18.

Accordingly, the withdrawal of the claim rejections under 35 U.S.C. § 103(a) is requested.

Respectfully submitted,



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